IN THE CLAIMS

1. (Currently Amended) An apparatus for determining a transmission rate, the apparatus comprising:

a speech/silence classifying portion, which classifies an input frame as speech or silence, based on a threshold value that is predetermined for each of a fixed code-book gain value (FCBG), a minimum value of an adaptive code-book gain value (ACBG), a noise to signal rate (NSR), and a difference between a maximum value and a minimum value of a pitch delay that correspond to an input parameter of a coded bit stream;

a voice/unvoiced classifying portion, which classifies as voiced/onset or unvoiced an input frame that is classified as speech by the speech/silence classifying portion, based on a new threshold value that is determined for the minimum value of the ACBG;

a voiced/onset classifying portion, which classifies as voiced or onset an input frame that is classified as voiced/onset by the voiced/unvoiced classifying portion, based on a class of a previous frame;

a stationary/non-stationary classifying portion, which classifies as a stationary or non-stationary an input frame that is classified as voiced by the voiced/onset classifying portion, based on a threshold value that is predetermined for the amount of change in the ACBG or a new threshold value of the difference between the maximum value and the minimum value of the pitch delay; and

a transmission rate determining portion, which determines a transmission rate an a type of the determined transmission rate for an input frame, based on transmission rates and types of the transmission rates that are predetermined for a class of the input frame corresponding to the result of said classification of the input frame as speech or silence, as

voiced or unvoiced, as voiced or onset, and as stationary or non-stationary, wherein the transmission rate is determined without using at least one of a linear prediction analysis and an open-loop pitch detector.

2. (Currently Amended) A method of determining a transmission rate in speech transcoding, the method comprising:

(a) classifying an input frame as speech or silence based on a threshold value that is predetermined for each of a fixed code-book gain value (FCBG), a minimum value of an adaptive code-book gain value (ACBG), a noise to signal rate (NSR), and a difference between a maximum value and a minimum value of a pitch delay that correspond to an input parameter of a coded bit stream;

(b) classifying as voiced/onset or unvoiced an input frame that is classified as speech determined in step (a), based on a new threshold value that is determined for the minimum value of the ACBG;

(c) classifying as voiced or onset an input frame that is classified as voice/onset determined in step (b), based on a class of a previous frame;

(d) classifying as stationary or non-stationary an input frame that is classified as voiced determined in step (c), based on a threshold value that is predetermined for the amount of change in the ACBG or a new threshold value of the difference between the maximum value and the minimum value of the pitch delay; and

(e) determining a transmission rate and a type of the determined transmission rate for an input frame, based on transmission rates and types of the transmission rates that are predetermined for a class of the input frame corresponding to the result of said classification of

the input frame as speech or silence, as voiced or unvoiced, as voiced or onset, and as stationary or non-stationary, wherein the transmission rate is determined without using at least one of a linear prediction analysis and an open-loop pitch detector.

3. (Currently Amended) The method of claim 2, wherein the new threshold value that is determined for the minimum value of the ACBG in step (b) is set to be greater than the threshold value that is predetermined for the minimum value of the ACBG in step (a).

4. (Canceled)

5. (Currently Amended) The method of claim 2, wherein the new threshold value of the difference between the maximum value and the minimum value of the pitch delay in step (d) is set to be smaller than the threshold value of the difference between the maximum value and the minimum value of the pitch delay in step (a).

6. (Canceled)

7. (Canceled)

8. (Canceled)

9. (Currently Amended) A computer readable recording medium having recorded thereon a program for a method of determining a transmission rate in speech transcoding, the method comprising:

(a) classifying an input frame as speech or silence based on a threshold value that is predetermined for each of a fixed code-book gain value (FCBT), a minimum value of an adaptive code-book gain value (ACBG), a noise to signal rate (NSR), and a difference between a maximum value and a minimum value of a pitch delay that correspond to an input parameter of a coded bit stream;

(b) classifying as voiced/onset or unvoiced an input frame that is classified as speech determined in step (a), based on a new threshold value of the minimum value of the ACBG;

(c) classifying as voiced or onset an input frame that is classified as voice/onset determined in step (b), based on a class of a previous frame;

(d) classifying as stationary or non-stationary an input frame that is classified as voiced determined in step (c), based on a threshold value that is predetermined for the amount of change in the ACBG or a new threshold value of the difference between the maximum value and the minimum value of the pitch delay; and

(e) determining a transmission rate and a type of the determined transmission rate for an input frame, based on transmission rates and types of the transmission rates that are predetermined for a class of the input frame corresponding to the result of said classification of the input frame as speech or silence, as voiced or unvoiced, as voiced or onset, and as stationary or non-stationary, wherein the transmission rate is determined without using at least one of a linear prediction analysis and an open-loop pitch detector.

10. (New) The method of claim 2, wherein in step (a), the input frame is classified as speech if the FCBG and the minimum value of the ACBG of the input frame are greater than their respective threshold values, and the NSR and the difference between the maximum value and the minimum value of the pitch delay are smaller than their respective threshold values.